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The invention refers to a window lifter switch for a motor vehicle with an actuator, which over an assigned sliding switching element of switching contacts actuated, tiltable stored in a casing, connection contacts are assigned to which.

From the DE 44 31 061 A1 a stroke slide switch, in particular well-known for the stroke sun roof of a motor vehicle, is. Connection contacts exhibiting casings is with one in neutral position swivel or adjustable operating knob provided, to which a lever is fastened, that a sliding switching element subjected. Swivelingmovable is stored at the sliding switching element a turning switching element, in which the lever of the operating knob movable intervenes. The two switching elements decrease/go back by a restoring device automatic into their starting position and to place the operating knob connected with them into its initial position. The restoring device is formed by a guide tube carrying at the turning switching element fastened, spring-loaded pressure cases and by two as well as deepened resetting pyramids basic projections projecting moulded on at a socket into the casing. Under the effect of a compression spring the pressure cases become outward against the deepened Rück< DP N=2> placing pyramids in the projections printed, whereby after releasing the operating knob the restoring device and concomitantly the switching elements take its zero position. The sliding switching element assigned contact spring ranges are brought by the swinging or the moving of the operating knob to the trick and/or to the plant on a punching lattice let in in the socket. The contact spring ranges are so limited that a larger number of current paths can be realized. With the stroke slide switch different engines are to be addressed, which exhibit both a on the right of and a left hand motion.

The moreover a jack switching mechanism is well-known for a two-stage actuation stroke, the part of an operating unit for electrical window lifters of a motor vehicle is from the DE 1 95 37 296 A1, which exhibit a pair operating plates below a longitudinal center line of a Wipptaste. The operating plates are coupled by means of flexible connecting arms and form such an actuator. Each operating plate subjects two push button switches, which are formed for assigned solid Kontaktstücken by hollow projections an exhibiting switching mat with, arranged Kontaktstücken in it and by a basis plate with the movable Kontaktstücken. With actuation of the Wipptaste this swivels around carrier axle ends of a casing, so that the actuated side of the Wipptaste moves downward. This movement directed downward will transfer over the assigned operating plate to, the right and left hollow projections of the switching mat arranged under it. The projections are in such a way arranged that due to different, influencing torques first the left projection becomes deformed and by the contact of the Kontaktstücke arranged here an electric circuit closed. After further Ab< DP N=3> waiting self-service transacting of the Wipptaste becomes also the right projection by the operating plate downward printed and a further electric circuit closed. Via releasing the Wipptaste the resetting the same takes place, and the closed electric circuits are interrupted. The allocation of a jack switching mechanism for the control of electrical window lifters saves the danger of unintentional actuation. Here in particular the closing of the window is unfavorable by inadvertent pressing of the Wipptaste, since from it possibly injuries of a person, who is for example with a hand or with the head in the closing range of the window, can result.

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It is therefore task of the invention, an electrical switch, in particular window lifter switches for a motor vehicle to create the kind initially specified which an unintentional closing of the windows excludes, is characterised a tactile seizing of the switch manipulation made possible and by a compact building method with as small a number of parts as possible with a reliable function.

According to invention the task is solved by the fact that in pressure direction for the downward movement of the window and in course direction for the upward motion of the window a two-stage pivoting movement is assigned to the actuator in each case, whereby the actuator subjects returning means for a linear moving of the sliding switching element back and forth that in each direction successively two switching contacts of a switching mat actuated.

By these measures one prevents to an inadvertent closing of the window, since the actuation of the actuator in course direction is only very consciously carried out. The moreover by the successively taking place admission of two switching contacts tactile seizing of the switch manipulation is made possible for a switching mat. Variation options regarding the detectability of the switch manipulation arise as a result of an appropriate arrangement of the mechanical resistor of the switching mat, is fixed to which by their strength and constructional arrangement. The admission of returning means for the linear movement of the switching element by the actuator makes a compact structure possible of the window lifter switch.

After a favourable arrangement of the invention the returning means cover the free, t-shaped trained end of a bar of the actuator and the free end of the bar taking up opening of the sliding switching element. Thus no additional parts, which make an appropriate deflection for the pivoting movement possible of the actuator into a linear movement of the sliding switching element, are necessary.

After an alternative arrangement of the invention the returning means cover, a double-armed bellcrank tiltable stored in the casing, whose arm intervenes end trained with a t-shaped in an opening of the sliding switching element and whose other arm is provided with horizontal facing trunnions, which angeformten from one at the actuator fork spread are. The

use of the bellcrank makes a variation for the pivoting movement possible of the actuator, whereby the substantial structure of the window lifter switch remains. Thus it is to be produced for the manufacturer possible the basic components in a large number and particulars to adapt parts which can be installed specific to a request.

Preferred the bellcrank exhibits two horizontal facing bearing journals, which intervene in corresponding openings of the casing. Since both the bellcrank and the casing in the injection moulding procedure from plastic are manufactured, is Lagerund without special manufacturing and/or. Assembly expenditure feasible.

The bellcrank transfers forces during the pivoting movement of the actuator to the sliding switching element and must for this a sufficient stability exhibit. Therefore the bellcrank is appropriately implemented in the range of the bearing journals in the cross section thickened, and the actuator assigned arm of the bellcrank is provided with ridges.

For the support of the power transmission during the turning of the actuator that is preferably provided the actuator turned arm of the bellcrank at the front side with an aperture, at whose tray a springy tongue is angeformt, which go-aged finallaterally from the actuator free from play. Furthermore the holding free from play the course at the actuator causes a positive switching feeling, since the actuator in this place does not put a free travel back. The springy effect of the tongue is among other things by the depth into the arm of the bellcrank let in of the aperture more adjustable and by means of relatively simple tool tools changeable.

Preferably that is semicircularly and the opening arranged at a widened end of the sliding switching element rechteckförmig trained the t-shaped end of the bar or the bellcrank in the cross section circle or. Sonach is given the necessary freedom of movement.

So that to easy adding of the bar or the bellcrank and the opening of the sliding switching element is made possible and prevented on the other hand the out sliding of the bar or the bellcrank from the opening of the sliding switching element in one of the stop positions of the sliding switching element, preferentially externallaterally in each case two opposite ridges are arranged at the long sides of the opening, which manage slightly into the opening and between itself the t-shaped end of the bar or the bellcrank take up.

Externallaterally two opposite feather/spring arms are arranged appropriately at the long sides of the opening, which rest under pre-loading against the t-shaped end of the bar or the bellcrank. Thus the bar of the actuator or the bellcrank play is stored freely in the opening of the sliding switching element and the tactile switching feeling is affected positively, since no unnecessary free travel must be overcome with the swinging of the actuator.

After a further training of the invention thought the sliding switching element is essentially plattenförmig trained and between stationary Führungsstegen horizontal lengthwise-adjustably stored. The moreover the sliding switching element on its top side exhibits ridges. Furthermore the sliding switching element with its lower surface on a connecting bracket of two switching mats rests upon, and Klipsnasen of stationary Klipsarme with play are assigned to the top side of the sliding switching element. By this execution of the storing without the use of additional single components one does. Führungsstege and Klipsarme are components of a socket and together with this in the injection moulding procedure are manufactured. Due to that approximately punctiform rest of the sliding switching element on the connecting bracket and its delimitation by the Klipsnasen of the Klipsarme and at the casing pushing away the ridges the friction losses are minimized upward during the Längsverschiebung of the sliding switching element. In the further the assembly of the sliding switching element is realizable by simple Einklipsen. The ridges of the sliding switching element work against a deflection of the same.

Appropriately is the sliding switching element on its lower surface with two off center its longitudinal axis shifted and mutually beabstandeten operating beginnings provided, which affect the switching contacts of the associated switching mat in each case. The sliding switching element with the angeformten operating beginnings is manufactured in a processing step and is economically producible sonach.

Preferably each switching mat covers two switching contacts in and to each other beabstandeten cathedrals lying next to each other, whereby the cathedrals are covered by a common operating plate in their upper range. Due to this arrangement the sliding switching element needs for the actuation of each switching mat only one operating beginning, there this over the operating plate on the switching contacts influences off center and as a function of the way first one of the switching contacts and afterwards both switching contacts by low pressure of the cathedrals actuated. The cathedrals lie side by side relatively close, whereby the switch is narrowly implemented, and are in such a way arranged that tactile recognizing of switching is ensured by their actuation when nicking the cathedrals.

In order to achieve a short overall length of the switch and a small assembly expenditure, those are the switching contacts of assigned connection contacts in right-angled a rib of a socket of the casing running to the longitudinal axis of the sliding switching element let in. The moreover a switching mat with two horizontal arranged switching contacts on a side of the rib of the socket is arranged in each case. Intakes of the connection contacts takes place appropriately via coating.

So that the connection contacts are protected against damage outside of the socket and errors are avoided with the terminal of the switch, the connection contacts are surrounded by a connection collar implemented as putting coding.

In order to take off and an ergonomic switch manipulation make the installation orifice possible of the switch in the motor vehicle completely, the top side of the casing is covered by a blind with let in hollow, in which the actuator intervenes. The blind can be assigned to the casing by means of solvable connecting elements or angeformt to the casing. The hollow is in such a way arranged that will easily behind-seize the actuator of the switch can, in order to operate it in course direction. Furthermore a retaining spring is arranged in each case for the simplified assembly of the switch in the motor vehicle at the front and the back of the casing. The retaining springs behind-seize the upper edge of an installation orifice and provide in such a way for a safe seat of the switch.

It understands itself to leave that those are usable managing specified and features below still which can be described not only in the combination indicated in each case, but also in other combinations, without the framework of the present invention.

The invention is more near described in the following on the basis an embodiment with reference to the associated designs. Show:

Fig. 1 a perspective display of the window lifter switch according to invention in a first embodiment,

Fig. 2 a sectional view in accordance with cut process II-II of the Fig. 1 of the window lifter switch,

Fig. 3 a sectional view in accordance with cut process III III the Fig. 2,

Fig. 4 a sectional view in accordance with cut process IV-IV of the Fig. 2,

Fig. 5 a sectional view in accordance with cut process V-V of the Fig. 4,

Fig. 6 a cut by a switching mat,

Fig. 7 a perspective display of the window lifter switch according to invention in an alternative embodiment,

Fig. 8 a sectional view in accordance with cut process VIII VIII the Fig. 7,

Fig. 9 a sectional view in accordance with cut process IX-IX of the Fig. 8,

Fig. 10 a display in accordance with cut process X-X of the Fig. 8 and

Fig. 11 a sectional view in accordance with cut process XI-XI of the Fig. 8.

The electrical window lifter switches an actuator 2 exhibits 1 in a first embodiment within the upper range, whose upper edge 3 over a blind 4 out-stands and which intervenes in a hollow 5 let in into the screen 4. The actuator 2 is in such a way trained that by Hineingreifen into the hollow 5 will behind-seize it can. The upper edge of the screen 4 manages 6 at all sides over a casing and does not cover a not represented installation orifice in a motor vehicle, which is slightly more largely limited than the casing 6. The connection of casing 6 and screen 4 takes place by means of Klipsverbindungen 7. For the realization of these Klipsverbindungen 7 is in the range of the front 8 of the casing 6 at one at the casing 6 angeformten, upward supernatant collar 9 a Klipsnase 10, which will behind-seize from the lower edge of the screen 4. Furthermore 6 two Klipsarme 12 from each other beabstandete in the range of the back 11 of the casing, which intervene in corresponding Klipsöffnungen 13 of the blind 4, are. The collar 9 exhibits a Klipsnase 15 on its sides 14 within the upper range in each case, those with lateral, circular Klipsöffnungen 16 of the actuator 2 Klipsverbindungen 17 forms. The Klipsverbindungen 17 represents a simultaneous rotary shaft 18, around which the actuator 2 implements a pivoting movement 19.

At the front 8 and back 11 of the casing 6 is in each case a retaining spring 20 arranged centrically, which is arranged in the lower range u-shaped, so that it embraces the lower edge of the casing 6. The adjustment of the retaining springs 20 takes place by means of Klipsverbindungen 21, whereby the casing exhibits 6 at front 8 in each case and back 11 a Klipsnase 22, which intervenes in an appropriate Klipsöffnung 23 of the retaining spring 14. The retaining springs 20 serve 1 in a not represented installation orifice of a motor vehicle for the fixing of the window lifter switch. A socket 24 is assigned to the casing 6, at whose top side into the casing of 6 importable and is angeformt a collar 26 exhibiting within the range the front 8 as well as back of 11 break-throughs 25. The break-throughs 25 serve 20 as freeing for the retaining springs arranged within this range. On the lower surface of the socket 24 a connection collar 27 is arranged. Lateral Klipsverbindungen 28 makes the fixing of the cap for 24 with the casing 6 possible. For the realization of the Klipsverbindungen 28 the collar 26 of the socket exhibits 24 two Klipsnasen 29 from each other beabstandete on each long side, which intervene in assigned Klipsöffnungen 30 of the casing 6.

The actuator 2 exhibits on its rounded off top side of symbols 31, those from not represented, light-emitting elements behind-shines to be can. Downward a bar 32 tapering in its thickness is on the lower surface of the actuator 2 centric and in an escape with the circular Klipsöffnungen 16 angeformt. The width of the bar 32 is 33 constant up to its free end implemented. The free end 33 of the bar 32 is trained t-shaped, whereby the opposite thighs exhibit a circular or semicircular cross section, and intervenes in a rechteckförmige opening 34 of a sliding switching element 35 arranged in the casing 6. At the long sides of the opening 34 in each case two opposite ridges 36 are arranged, which manage 34 slightly into the opening and take up between itself the t-shaped end 33 of the bar 32. In order to adjust the existing play between the ridges 36 and the t-shaped end 33 of the bar 32, a feather/spring arm 37 is attached at each long side of the opening 34 between the ridges 36, which rests under pre-loading against the t-shaped end 33 of the bar 32. The free end 33 of the bar 32 and the opening 34 of the sliding switching element 35 form returning means 38 in this embodiment.

The sliding switching element 35 is trained essentially plattenförmig with constant thickness and exhibits within the range of the opening 34 a widening 39. All long sides 40 of the sliding switching element 35 are parallel to each other implemented. The sliding switching element 35 is horizontal led between stationary, in each case in pairs facing Führungsstegen 41 of the socket 24. In the range, within which the Führungsstege 41 rest against one of the long sides of the sliding switching element 35, their faces are provided with a radius 42. The vertical delimitation of the sliding switching element 35 takes place upward via stationary, in each case in pairs facing Klipsarme 43 of the socket 24, whose Klipsnasen is assigned to 44 of the top side of the sliding switching element 35 with play. If the top side of the sliding switching element is provided with ridges 45, spreads the Klipsnasen the sliding switching element 35 in boundary regions, which are free of ridges 45. Therefore the horizontal mobility of the sliding switching element 35 is ensured to the necessary extent. The lower surface of the sliding switching element 35 exhibits two operating beginnings 46, which are off center to the longitudinal axis 47 of the sliding switching element 35 arranged and mutually beabstandet. The vertical delimitation of the sliding switching element 35 is carried out downward to the one by a flexible connecting bracket 48 two switching mats 49 and on the other hand by paragraphs 50 in the upper range of the Führungsstege 41, whereby a vertical backlash compensation can be caused.

The two switching mats 49 coupled by the connecting bracket 48 are oppositely arranged. Between the switching mats 49 at the socket 24 angeformte and right-angled to the longitudinal axis of the sliding switching element 35 aligned rib 51 is, into which a punching lattice 52 is injected. The connection contacts 53 of the punching lattice 52 rise up in the

connection collar 27 of the socket 24. On each side of the rib 51 centrically a bar 54 is arranged, into a langlochförmige opening 55 of the assigned switching mat 49 intervenes and these so fixed. Each switching mat 49 exhibits two cathedrals next to one another and to each other beabstandete 56, whereby each cathedral 56 takes up a switching contact 57. The two cathedrals 56 of each switching mat 49 are covered within their upper range by in each case a common operating plate 58. The two switching mats 49 with associated operating plates 58 are between the operating beginnings 46 of the sliding switching element 35 right-angled to its longitudinal axis 47. Each operating beginning 46 is provided in its contact range with the operating plate 58 with a V-shaped point 59.

With the swinging of the actuator 2 of the window lifter switch 1 from the zero position 60 in pressure direction into a switching position of first stage 61 a pivoting movement of the bar 32 around the rotary shaft 18 directed to the left takes place. And both by the ridges 36 and the t-shaped end 33 of the bar 32 held intervening in the opening 34 of the sliding switching element 35 by the feather/spring arms 37 transfers this movement directed to the left to the sliding switching element 35. By the aforementioned returning means 38 the rotatorische movement of the bar 32 is transferred of the direction of motion of the bar 32 the following movement of the sliding switching element 35 into a translatorische. The right operating beginning 46 begins to affect the operating plate 58 of the right switching mat 49. Due to the arrangement of the operating beginning 46 outside of the longitudinal axis 47 of the sliding switching element 35 and the Rebelverhältnisse resulting from it, the largest torque affects the cathedral 56 in the proximity of the operating beginning 46, so that this nicks and the assigned switching contact 57 closes an electric circuit on the punching lattice 52. By appropriate constructional measures the event of nicking the cathedral makes a tactile recognizing of the switching position for 56 possible. In this switching position of first stage 61 a not represented window lifter engine is headed for in such a manner that a not represented motor vehicle window proceeds slowly downward. When releasing the actuator 2 the cathedral 56 jumps back into its initial position. The electric circuit is opened and the motor vehicle window stops in the reached position. By the resetting effect of the cathedral 56 both the sliding switching element 35 and the actuator 2 into the zero position 60 are reset. If the swinging of the actuator 2 of the switch 1 from the zero position 60 takes place in pressure direction into a switching position of second stage 62, the courses of motion already described follow. The right operating beginning 46 begins to affect the operating plate 58 of the right switching mat 49 and brings it the nearest cathedral 56 due to the working torques first to nicking. The assigned switching contact 57 closes an electric circuit on the punching lattice 52. Since the switching position of second stage 62 entails a larger Linksbewegung of the sliding switching element 35 than the switching position of first stage 61, second begins to nick in larger spacing to the operating beginning 46 arranged second cathedral 56 after the closing of the first electric circuit. It assigned switching contact 57 closes a further electric circuit on the punching lattice 52. Also the shifting process of the second cathedral 56 is tactile perceptible. In such a way headed for window lifter engine proceeds the motor vehicle window quick downward into its stop position. The resetting of the actuator 2 takes place after releasing the same due to the forces of the jumping back cathedrals 56.

In order the motor vehicle window upward too muddled, takes place the pivoting movement 19 of the actuator 2 in course direction, in switching positions of first 63 and/or second stage 64. The courses of motion to the actuation of the right switching mat 49 are the equivalent described already, however in reverse direction.

In an alternative embodiment of the window lifter switch 1 the actuator 2 is in such a manner let in into the hollow 5 of the blind 4 that the upper edge 3 dazzles not over 4 stands out. Below the rotary shaft 18 the representing Klipsverbindungen 17, around which the actuator 2 implements the pivoting movement 19, is provided the same by means of a circulating seal 65 lying close against the blind, a contamination of the switch inside prevented.

To the actuator 2 two opposite as well as to each other beabstandete forks 66 are angeformt, which serve 67 of a bellcrank 68 tiltable stored in the casing 6 for spreading horizontal trunnions. For the easement of the assembly 66 import bevels 69 intended for the trunnions 67 are at the free ends of the forks.

The bellcrank 68 is double-armed implemented, whereby an arm 70 with the trunnions 67 is provided and another arm 71 a t-shaped exhibits trained end 72, which is in the cross section circle or semicircularly trained and intervenes into the opening 34 of the sliding switching element 35. The pivoting movement carries out the bellcrank 68 by means of two horizontal facing bearing journals 73, which intervene in corresponding openings 79 of the collar 9 of the casing 6. In the range of the bearing journals 73 the bellcrank 68 in the cross section is thickened implemented. The trunnions 67 basic, that actuator 2 turned arm 70 of the bellcrank 68 is at the front side with the arm 70 dividing aperture 74 provided. To the tray of the aperture 74 a springy tongue 75 is angeformt, which go-aged finallaterally from the actuator 2 free from play. For this the actuator 2 exhibits arranged Anformungen according to 76. For the reinforcement of the arm 70, opposite in each case ridges 77 are intended.

The returning means 78 are formed in this alternative embodiment by the bellcrank 68 and the opening 34 of the sliding switching element 35.

While the pivoting movement 19 of the actuator 2 of the window lifter switch 1 from the zero position 60 in pressure direction into a switching position of first stage 61 the t-shaped end 72 of the bellcrank 68 implements a pivoting movement directed to the right against the spring action of the tongue 75, the sliding switching element 35 follows. The transformation of the rotatorische movement of the bellcrank 68 into a translatorische movement of the sliding switching element takes place by means of the returning means 78. The left operating beginning 46 begins to affect the operating plate 58 of the left switching mat 49. As already described takes place the closing electric circuit on the punching lattice 52 via the assigned switching contact 57 in the nicking cathedral 56, whereby by the design of the cathedral tactile seizing of the switching position is made possible for 56. Due to appropriate allocation of the connection contacts 53 a motor vehicle window is slowly opened. When releasing the actuator 2 the cathedral 56 jumps back into its initial position. The electric circuit is opened and the motor vehicle window stops in the reached position. By the resetting effect of the cathedral both the sliding switching element 35 and the actuator 2 into the zero position 60 are brought to 56 and the supporting effect of the prestressed tongue 75. In the switching position of second stage 62 in pressure direction a further electric circuit, as above, is described on the punching lattice 52 closed and the motor vehicle window opens quick, until it reaches its stop position.

To the closing of the motor vehicle window the actuator 2 in course direction, in switching positions of first 63 and/or

second stage 64 is swivelled. The following courses of motion to the actuation of the left switching mat 49 get lost equivalent to described the already, however naturally in reverse direction.

Reference symbol list
1 window lifter switch
2 actuator
3 upper edge
4 blind
5 hollow
6 casings
7 Klipsverbindung
8 front
9 collars
10 Klipsnase
11 back
12 Klipsarm
13 Klipsöffnung
14 side
15 Klipsnase
16 Klipsöffnung
17 Klipsverbindung
18 rotary shaft
19 pivoting movement
20 retaining spring
21 Klipsverbindung
22 Klipsnase
23 Klipsöffnung
24 sockets
25 break-through
26 collars
27 connection collars
28 Klipsverbindung
29 Klipsnase
30 Klipsöffnung
31 symbol
32 bar
33 free end
34 opening
35 sliding switching element
36 ridge
37 feather/spring arm
38 returning means
39 widening
40 long side
41 Führungssteg
42 radius
43 Klipsarm
44 Klipsnase
45 ridge
46 operating beginning
47 longitudinal axis
48 connecting brackets
49 switching mat
50 paragraph
51 rib
52 punching lattices
53 connection contact
54 bar
55 opening
56 cathedral
57 switching contact
58 operating plate
59 V-shaped point
60 zero position
61 first stage
62 second stage
63 first stage
64 second stage
65 seal
66 fork
67 trunnions
68 bellcranks
69 import bevel
70 arm

71 arm
72 t-shaped end
73 bearing journals
74 aperture
75 tongue
76 Anformung
77 ridge
78 returning means
79 opening

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Result Page

1. Window lifter switch (1) for a motor vehicle with one in an housing (6) tiltable stored actuator (2), that over an assigned sliding switching element (of 35) switching contacts (57) actuated, connection contacts (53) are assigned to which, characterised in that the actuator (2) in pressure direction for the downward movement of the window and in course direction for the upward motion of the window in each case a two-stage pivoting movement (19) assigned is, whereby the actuator (2) subjects returning means (38, 78) for a linear moving of the sliding switching element (35 back and forth), that in each direction successively two switching contacts (57) of a switching mat (49) actuated.

2. Window lifter switch according to claim 1, characterised in that the returning means (38) the free, t-shaped trained end (33) of a bar (32) of the actuator (2) and the free end (33) of the bar (32) taking up opening (34) of the sliding switching element (35) cover.

3. Window lifter switch according to claim 1, characterised in that the returning means (78) one in the casing (6) tiltable stored, double-armed bellcrank (68) cover, whose arm (71) intervenes end (72), trained with a t-shaped, in an opening (34) of the sliding switching element (35) and whose other arm (70) is provided with horizontal facing trunnion (67), which angeformten from one at the actuator (2) fork (66) spread is.

4. Window lifter switch according to claim 3, characterised in that of the bellcranks (68) two horizontal facing bearing journals (73) exhibits, which intervene in corresponding openings (79) of the casing (6).

5. Window lifter switch according to claim 4, characterised in that of the bellcranks (68) in the range of the bearing journals (73) in the cross section is thickened implemented, and which is provided the actuator (2) assigned arm (70) of the bellcrank (68) with ridges (77).

6. Window lifter switch after one of the claims 3 to 5, characterised in that that the actuator (2) turned arm (70) of the bellcrank (68) is at the front side with an aperture (74) provided, at whose tray a springy tongue (75) is angeformt, which go-aged finallaterally from the actuator (2) free from play.

7. Window lifter switch after the claims 2 and 3, characterised in that the t-shaped end (33) of the bar (32) or the bellcrank (68) in the cross section circle or semicircularly and the opening (34), arranged at a widened end (39) of the sliding switching element (35), is rechteckförmig trained.

8. Window lifter switches after one of the claims 2, 3 and 7, characterised in that at the long sides of the opening (34) externallaterally in each case two opposite ridges (36) are arranged, which manage slightly into the opening (34) and between itself the t-shaped end (33) of the bar (32) or the bellcrank (68) take up.

9. Window lifter switches after one of the claims 2 to 8, characterised in that at the long sides of the opening (of 34) externallaterally two opposite feather/spring arms (37) are arranged, which rest under pre-loading against the t-shaped end (33) of the bar (32) or the bellcrank (68).

▲ top 10. Window lifter switch after one of the claims 1 to 9, characterised in that the sliding switching element (35) essentially plattenförmig trained and between stationary Führungsstegen (40) horizontal lengthwise-adjustably stored is.

11. Window lifter switch after one of the claims 1 to 10, characterised in that the sliding switching element (35) on its top side ridges (45) exhibits.

12. Window lifter switch after one of the claims 1 to 11, characterised in that the sliding switching element (35) with its lower surface on a connecting bracket (48) two switching mats (49) rests upon, and Klipsnasen (44) stationary Klipsarme (43) with play are assigned to the top side of the sliding switching element (35).

13. Window lifter switches after one of the claims 1 to 12, characterised in that the sliding switching element (35) on its lower surface with two off center its longitudinal axis (47) shifted and mutually beabstandeten operating beginnings (46) are provided, which affect in each case the switching contacts (57) of the associated switching mat (49).

14. Window lifter switch after one of the claims 1 to 13, characterised in that each switching mat (of 49) two switching contacts (57) in and to each other beabstandeten cathedrals (56), lying next to each other, covers, whereby the cathedrals (56) are covered in their upper range by a common operating plate (58).

15. Window lifter switches after one of the claims 1 to 14, characterised in that those the switching contacts (of 57) assigned connection contacts (53) in one are right-angled to the longitudinal axis (47) of the sliding switching element (35) running rib (51) of a socket (24) of the casing (6) let in.

16. Window lifter switch according to claim 15, characterised in that a switching mat (49) with two horizontal arranged switching contacts (57) on a side of the rib (51) of the socket (24) in each case is arranged.

17. Window lifter switches after one of the claims 1 to 16, characterised in that the connection contacts (53) by a

connection collar (27), implemented as putting coding, are surrounded.

18. Window lifter switch after one of the claims 1 to 17, characterised in that the top side of the casing (6) by a screen (4) with let in hollow (5) is covered, in which the actuator (2) intervenes.

19. In each case window lifter switch after one of the claims 1 to 18, characterised in that at the front (8) and the back (11) of the casing (6) a retaining spring (20) is arranged.